

Response to Office Action mailed 9/26/2007

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Examiner: FARIS S ALMATRAHI

Art Unit: 3609

Title: Compact Item Descriptor, Catalog System and Item Part Number Validation

Application Number: 10/602,301

Inventor: Norman Ken Ouchi

Date: December 22, 2007

Action is non-Final

Claims 1-20 are pending

Claims 1-20 are rejected.

Claims 1-20 are rejected under U.S.C. 35 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention.

Claims 1-20 are rejected under U.S.C. 35 103(a) as unpatentable over Blutinger et al U.S. Patent 5,231,566 in view of Brathwaite et al U.S. Publication 2003/0221172 A1 and Kavanagh et al U.S. Patent 5,838,965.

#### Discussion

The claims are amended to remedy the U.S.C. 35 112 rejections and the other issues cited by the Examiner. The inventor sincerely appreciates the Examiner's comments and descriptions of these rejections for each of the claims.

In amending the claims, the U.S.C. 35 103(a) grounds for rejection will also be addressed. The discussion will address the amended claims and the prior art cited by the Examiner.

1) The prior art illustrates the difficulties encountered by catalogs, Approved Manufacturing Lists (AML), materials planning systems, and other automated systems that depend on accurate part numbers for the items in these systems. Material planning systems frequently use an internal part number system that assigns a part number for each planned item. Many items are not manufactured but are purchased to be assembled into the

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manufactured products. To purchase an item, the supplier and supplier part number must be accurately determined. The mapping of part number to supplier and supplier part number is contained in the AML. The source of the supplier name and supplier part number is the catalog. The item in all three systems is the same. In the prior art, the description of the item is a text string meant for a human to read and interpret. Hence, the bridging of the various part numbers between these systems has been a manual, error prone, time consuming process. The present invention is a method to generate a machine readable character string as the compact item descriptor so that an industry with multiple competing companies selling items can generate consistent compact item descriptors so that an item will have the same description in all systems and interchangeable items are easily identified.

2) With the prior art, the determination of the part number of a purchased item is manual. Blutinger illustrates the manual processes required to determine if a catalog item is unique or a duplicate if the item lacks a barcode. Brathwaite initializes processes with the supplier name and supplier part number in the base tables in an attempt to avoid addressing the difficult and manual portion of the supplier part number process. Kavanagh teaches the use of an object orientated database in an attempt to automate the classification of items to resolve the supplier part number. The prior art fails in these automation attempts in that the item description is still requires a person to read and interpret a description. In Kavanagh, complex queries are formulated to determine if an item is in the database. The prior art does not disclose a machine readable description, a character string, that identifies an item with enough resolution to determine if the item is in the catalog and to determine interchangeable items.

3) The prior art teaches the use of a classification tree. The most recognizable is used in biology to classify all living things including *homo sapiens*. In the present invention, a classification tree for a set of items, including a first item and second item is defined. At each leaf or terminal node, a set of parameters are defined such that values assigned to each parameter specify an item. The classification tree and the parameters at each leaf node are defined such that two items that classify to the same leaf and have the same parameter values are interchangeable. That is, a first item can functionally replace the second item. There may be other characteristic that distinguish the two items but these characteristics are not functionally significant. For example, the color of an electronic

resistor is not functionally significant but the resistance value is. Thus, the color of the resistor is not in the parameter list for the leaf node of a resistor but the resistance value is. Interchangeable items classify to the same leaf and have the same parameter values.

- 4) In the present invention, each leaf node is assigned a distinct character string that identifies the leaf node. For each leaf node, a set of parameters are defined and a ~~paramotor value is oncodod as a character or string of characters such that the encoded~~ parameter values are a character string.
- 5) The compact item descriptor is formed by concatenating the leaf node character string with the encoded parameter values. Two items that have the same classification and parameter values will have the same compact item descriptor and are interchangeable.
- 6) The compact item descriptor is stored in the item description field which is easily queried as a string. Thus, all items that are interchangeable with an items described by a ~~compact item docriptor are found with a simple query of the description field with the~~ compact item descriptor as the query argument. The complexities of Kavanagh and the object oriented database are avoided. The classification table and the catalog, AML, and materials systems are easily implemented in a standard SQL or relational database.
- 7) As a single level query, SQL wild cards can be imbedded in the compact item descriptor to find items that match the partially defined compact item descriptor. Thus, parameters that are not important can be ignored in the query or if the leaf character strings are defined to allow multiple leaf queries, the wild card can be in the leaf identifier portion of the compact item identifier.

The present invention is significantly different for that taught by the prior art and serves a very useful purpose. The claims have been amended to point out and distinctly claim this subject matter as described.

Claims are grouped as claims 1-8, 10-11; 12-17; 21-24 where claims 1, 12, and 21 are independent claims.

The inventor is happy to send a Word file which displays both mark-up and final form. Please send an e-mail to [Ken.Ouchi@Avidtecs.com](mailto:Ken.Ouchi@Avidtecs.com) and a reply e-mail with the file will be sent.

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The inventor appreciates the Examiner's thorough search and thoughtful response.  
Please call the inventor after reading his response to clarify any issues.

Respectfully Submitted



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